



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,288	03/12/2004	Michael T. Costello	0178-PA	8266
<div>7590 Michael P. Dilworth Crompton Corporation Benson Road Middlebury, CT 06749</div>			<div>EXAMINER GOLOBOY, JAMES C</div>	
			<div>ART UNIT 1714</div>	<div>PAPER NUMBER</div>
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/05/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/800,288

Applicant(s)

COSTELLO ET AL.

Examiner

James Goloboy

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,8,10-16,19 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,8,10-16,19 and 21-28 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. All outstanding rejections have been overcome by applicant's amendment of 1/22/07. New grounds of rejection necessitated by the amendment are set forth below.

Claim Objections

2. Claim 24 is objected to because of the following informalities: Claim 24 requires 1,3,5-tris(hydroxyethyl)-s-triazine as the biocide. However, this biocide is not one of those recited in claim 23, from which claim 24 depends. Appropriate correction is required.

It is the examiner's opinion that applicant means to recite 1,3,5-tris(2-hydroxyethyl)-S-triazine, and the claim has been considered in that way in the rejections set forth below.

Claim Rejections - 35 USC § 103

3. Claims 1-3, 10, 12-14, and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos (GB Pat. App. No. 2,193,972 A) in view of Emert (U.S. Pat. No. 5,498,809) and Bennett (U.S. Pat. No. 4,925,582).

The discussions of Csikos, Emert, and Bennett in paragraphs 2, 6, and 11 of the office action mailed 10/24/06 are incorporated here by reference. The differences between Csikos and the currently presented claims are:

- i) Csikos discloses a composition containing an antioxidant, but does not disclose the specific types of antioxidants in claims 1-3 or 12-14.

ii) Csikos discloses a metalworking fluid containing a biocide, but does not disclose the specific biocides recited in claims 1, 10, 12, or 21.

With respect to i), Emert, in column 75, discloses antioxidants for use in a lubricating composition. In column 75 line 1, Emert teaches alkylated diphenylamines, as recited in Claim 2. In column 75 lines 10-34, Emert teaches alkylated phenylenediamine antioxidants, as recited in Claim 2, including many of the specific antioxidants recited in Claim 3. The analogous method claims 12-14 are also met, as preparing a lubricant composition containing the antioxidant additives must involve the step of adding the additives to the composition.

With respect to ii), Bennett, in column 3 lines 20-31, teaches a group of biocides for use in an "industrial water based fluid", including all the types of biocides recited in claim 1, including all of the specific biocides of Claim 10 except 1,3,5-tris(2-hydroxyethyl)-S-triazine. From column 2 lines 63 through column 3 line 3, Bennett notes that the "industrial water based fluid" may be a metalworking fluid. The analogous method claims 12 and 21 are also met, as preparing a metalworking fluid containing the biocide additives must involve the step of adding the additives to the fluid.

It would have been obvious to one of ordinary skill in the art to use the antioxidants taught by Emert in the lubricant of Csikos to inhibit the deterioration of mineral oils, as taught in column 70 lines 43-47 of Emert.

It would have been obvious to one of ordinary skill in the art to use the biocides taught by Bennett in the fluid of Csikos, for the purpose of reducing or inhibiting the growth of microorganisms, as taught in column 1 lines 8-10 of Bennett.

4. Claims 4-5 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Bennett as applied to claims 1-3, 10, 12-14, and 21 above, and further in view of Crompton Corporation

(http://www.cromptoncorp.com/servlet/ContentServer?pagename=Crompton/ck_article/pressrelease&c=ck_article&cid=1042056763595&type=whatsnew and http://www.cromptoncorp.com/servlet/ContentServer?pagename=ck/pressrelease&c=ck_article&cid=1003866980424&p=984583117820&type=whatsnew).

The discussions of Csikos, Emert, and Bennett in paragraph 3 above and Crompton Corporation in paragraph 7 of the office action mailed 10/24/06 are incorporated here by reference. Csikos, Emert, and Bennett disclose a metalworking fluid containing an antioxidant including alkylated diphenylamines, but do not disclose the specific types of antioxidants in 4-5 and 15-16.

The first Crompton Corporation press release (http://www.cromptoncorp.com/servlet/ContentServer?pagename=Crompton/ck_article/pressrelease&c=ck_article&cid=1042056763595&type=whatsnew), which is dated January 7, 2003 and therefore qualifies as prior art under 35 USC 102(b), discloses Naugalube 438L (mono-, di-, and tri-nonylated diphenylamine) and Naugalube 640 (butylated(30%) octylated(24%) diphenylamine) as antioxidants for use in lubricating compositions, as recited in Claims 4 and 5. The second Crompton Corporation press release

(<http://www.cromptoncorp.com/servlet/ContentServer?pagename=ck/pressrelease&c=c>

Art Unit: 1714

[k_article&cid=1003866980424&p=984583117820&type=whatsnew](#)), dated October 30, 2001, teaches Naugalube APAN, an octylated phenyl- α -naphthylamine as recited in Claim 4, as an antioxidant additive for lubricant compositions. The analogous method claims 15-16 are also met, as preparing a lubricant composition containing the antioxidant additive must involve the step of adding the additive to the composition.

It would have been obvious to one of ordinary skill in the art to use the antioxidants taught by Crompton Corporation in the lubricant of Csikos, Emert, and Bennett to prevent the premature degradation of the composition.

5. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos, Emert, and Bennett as applied to claims 1-3, 10, 12-14, and 21 above, and further in view of Calabrese (U.S. Pat. No. 6,348,514).

The discussions of Csikos, Emert, and Bennett in paragraph 3 above and Calabrese in paragraph 8 of the office action mailed 10/24/06 are incorporated here by reference. Csikos, Emert, and Bennett disclose a metalworking fluid containing an antioxidant, but do not disclose the specific types of antioxidants in 4-5 and 15-16.

Calabrese, in column 9 lines 32-35, teaches 3,5-di-t-butyl-4-hydroxy-hydrocinnamic acid, C7-C9 branched alkyl ester, as an antioxidant as recited in Claim 4. The analogous method Claim 15 is also met, as preparing a lubricant composition containing the antioxidant additive must involve the step of adding the additive to the composition.

Art Unit: 1714

It would have been obvious to one of ordinary skill in the art to use the antioxidant taught by Calabrese in the lubricant of Csikos, Emert, and Bennett to prevent the premature degradation of the composition.

6. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Bennett as applied to claims 1-3, 10, 12-14, and 21, above, and further in view of Yamazaki (U.S. Pat. No. 6,075,065).

The discussions of Csikos in view of Emert and Bennett in paragraph 3 above and Yamazaki in paragraph 9 of the office action mailed 10/24/06 above are incorporated here by reference. The combination of Csikos, Emert, and Bennett discloses hindered phenolic antioxidants, but not the specific antioxidants recited in Claim 8.

Yamazaki, in column 14 lines 12-27, teaches hindered phenolic antioxidants, and in column 14 lines 14-15 specifically teaches 2,6-di-t-butyl hydroxytoluene as an antioxidant, as recited in Claim 8. The analogous method claim 19 is also met, as preparing a lubricant composition containing the antioxidant additive must involve the step of adding the additive to the composition.

It would have been obvious to one of ordinary skill in the art to use the 2,6-di-t-butyl hydroxytoluene antioxidant taught by Yamazaki as the hindered phenolic antioxidant in the composition of Csikos, Bennett, and Emert in order to inhibit the deterioration of mineral oils, as taught in column 70 lines 43-47 of Emert.

Art Unit: 1714

7. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Bennett as applied to claims 1-3, 10, 12-14, and 21 above, and further in view of McEntee (U.S. Pat. No. 4,624,679).

The discussions of Csikos in view of Emert and Bennett in paragraph 3 above and McEntee in paragraph 9 of the office action mailed 10/24/06 above are incorporated here by reference. The combination of Csikos, Emert, and Bennett discloses hindered phenolic antioxidants, but not the specific antioxidants recited in Claim 8.

McEntee, from columns 4-40, teaches many antioxidant compounds. In column 19 McEntee discloses the antioxidant sold under the trade name "Irganox 259", and teaches that Irganox 259 is thiodiethylene-bis(3,5-di-t-butyl-4-hydroxyhydrocinnamate), as recited in Claim 8. The analogous method claim 19 is also met, as preparing a lubricant composition containing the antioxidant additive must involve the step of adding the additive to the composition.

It would have been obvious to one of ordinary skill in the art to use the is thiodiethylene-bis(3,5-di-t-butyl-4-hydroxyhydrocinnamate) antioxidant taught by McEntee as the hindered phenolic antioxidant in the composition of Csikos, Bennett, and Emert in order to inhibit the deterioration of mineral oils, as taught in column 70 lines 43-47 of Emert, and because the antioxidant works particularly well in combination with a biocide, as taught in the abstract of McEntee.

8. Claims 1-3, 10-14, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Fields (U.S. Pat. No 5,981,632).

The discussions of Csikos and Emert in paragraph 3 above and Fields in paragraph 12 of the office action mailed 10/24/06 are incorporated here by reference. Csikos and Emert, disclose compositions comprising an antioxidant and a biocide which, but not the specific triazines recited in claims 11 and 22.

In column 5 lines 62-67, Fields discloses 1,3,5-tris(2-hydroxyethyl)-S-triazine as a biocide in a water-based emulsion, as recited in Claims 10-11. More generally, this biocide is a triazine, as recited in Claim 1. The analogous method claims 12 and 21-22 are also met, as preparing a composition containing the biocide additives must involve the step of adding the additives to the composition.

It would have been obvious to one of ordinary skill in the art to use the biocide taught by Fields in the fluid of Csikos and Emert, for the purpose of reducing or inhibiting the growth of bacteria and microorganisms, as taught in column 5 lines 55-58 of Fields.

9. Claims 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Fields as applied to claims 1-3, 10-14, and 21-22 above, and further in view of Crompton Corporation.

The discussions of Csikos, Emert, and Fields in paragraph 8 above and Crompton Corporation in paragraph 4 above are incorporated here by reference. The use of the antioxidants of Crompton Corporation in the composition of Csikos, Emert, and Fields meets the limitations of claims 23-28.

It would have been obvious to one of ordinary skill in the art to use the antioxidants taught by Crompton Corporation in the lubricant of Csikos, Emert, and Fields to prevent the premature degradation of the composition.

10. Claims 23-25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Fields as applied to claims 1-3, 10-14, and 21-22 above, and further in view of Calabrese.

The discussions of Csikos, Emert, and Fields in paragraph 8 above and Calabrese in paragraph 5 above are incorporated here by reference. The use of the antioxidants of Calabrese in the composition of Csikos, Emert, and Fields meets the limitations of claims 23-25 and 27.

It would have been obvious to one of ordinary skill in the art to use the antioxidants taught by Calabrese in the lubricant of Csikos, Emert, and Fields to prevent the premature degradation of the composition.

11. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Fields as applied to claims 1-3, 10-14, and 21-22 above, and further in view of Yamazaki.

The discussions of Csikos, Emert, and Fields in paragraph 8 above and Yamazaki in paragraph 6 above are incorporated here by reference. The use of the antioxidant of Yamazaki in the composition of Csikos, Emert, and Fields meets the limitations of claims 23-24.

It would have been obvious to one of ordinary skill in the art to use the antioxidants taught by Yamazaki in the lubricant of Csikos, Emert, and Fields to prevent the premature degradation of the composition.

12. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Fields as applied to claims 1-3, 10-14, and 21-22 above, and further in view of McEntee.

The discussions of Csikos, Emert, and Fields in paragraph 8 above and McEntee in paragraph 7 above are incorporated here by reference. The use of the antioxidant of McEntee in the composition of Csikos, Emert, and Fields meets the limitations of claims 23-24.

It would have been obvious to one of ordinary skill in the art to use the antioxidants taught by McEntee in the lubricant of Csikos, Emert, and Fields to prevent the premature degradation of the composition.

Response to Arguments

13. Applicant's arguments filed 1/22/07 have been fully considered but they are not persuasive. Applicant's arguments are centered on the alleged unexpected synergistic effect produced by the combination of the claimed antioxidants and biocides. However, the evidence for this effect provided in the specification is incommensurate with the scope of the claim. All the examples in the specification contain approximately 0.25% by weight of the antioxidant and biocide, while the claims encompass any concentration of

Art Unit: 1714

antioxidant and biocide. Also, only a small number of antioxidant/biocide combinations are presented in the examples, while the claims, especially claim 1, encompass hundreds of possible combinations. Evidence of synergistic effects for the vast majority of these combinations has not been provided.

Applicant also argues that an antioxidant is an optional component of the composition of Csikos. This does not constitute a teaching away from the addition of an antioxidant; to the contrary, Csikos teaches on page 2 lines 51-53 suitable antioxidant additives for the composition, and provides sample compositions comprising antioxidants. Therefore, it would have been obvious to one of ordinary skill to include an antioxidant in the composition of Csikos.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 1714

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Goloboy whose telephone number is 571-272-2476. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James E. Coloboy
JCG

Vasu Jagannathan
VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700